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PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

REC'D 11 MAY 2004

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(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 305127517	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).
International Application No. PCT/AU2003/000018	International Filing Date (day/month/year) 9 January 2003	Priority Date (day/month/year) 9 January 2002
International Patent Classification (IPC)-or national classification and IPC Int. Cl. ⁷ G01V 15/00, G09F 3/02, G01N 31/22		
Applicant I.SURF PTY LTD et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheet(s).

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☒ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 25 July 2003	Date of completion of the report 22 April 2004
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer ZOE BRADY Telephone No. (02) 6283 7947

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I. Basis of the report**1. With regard to the elements of the international application:***

- ☒ the international application as originally filed.
- ☐ the description, pages , as originally filed,
pages , filed with the demand,
pages , received on with the letter of
- ☐ the claims, pages , as originally filed,
pages , as amended (together with any statement) under Article 19,
pages , filed with the demand,
pages , received on with the letter of
- ☐ the drawings, pages , as originally filed,
pages , filed with the demand,
pages , received on with the letter of
- ☐ the sequence listing part of the description:
pages , as originally filed
pages , filed with the demand
pages , received on with the letter of

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/fig.

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report

IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☒ not complied with for the following reasons:

See Supplemental Box.

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☒ all parts.
- ☐ the parts relating to claims Nos.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims 7, 8, 11-14, 18, 21-31, 33	YES
	Claims 1-6, 9, 10, 15-17, 19, 20, 32, 34-38	NO
Inventive step (IS)	Claims 26-31	YES
	Claims 1-25, 32-38	NO
Industrial applicability (IA)	Claims 1-38	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

(a) EP 1055919 A1

(b) US 6190610 B1

(c) DE 4303035 A1

Invention 1 (Claims 1-31, 34-38)**Novelty (N) Claims 1-6, 9, 10, 15-17, 19, 20, 34-38**

Claims 1, 34, 35: A large number of patent documents, from which citations (a) and (b) are selected, disclose the features of the current invention as defined in claims 1, 34 and 35. See the International Search Report for a more extensive list of citations. Citation (a) discloses a temperature indicating material 7 including barcode information that changes colour according to exposure to temperature and/or time (paras [0025-0028]). For example, the barcode number changes from "49000051" to "49000054" to indicate the exposure period (fig 7). Citation (b) teaches a food contamination detector comprising barcode symbols and an indicator printed onto a substrate which changes colour when food is contaminated and causes changes in the readability of the barcode symbols (abstract). The indicator can comprise a bar, symbol, letters or combination of these (col 6 lines 25-29). Therefore, each of these citations disclose the features of claims 1, 34 and 35 which are therefore not novel.

Claims 2-6, 9, 20, 36-38: The features of these claims are disclosed in either citation (a) or (b). For example, see citation (a) which discloses that the elements have binary values, the symbols are graphic or characters including alpha-numeric characters to form a 1-dimensional barcode (fig 7) as defined in current claims 2 to 6 and 20, the barcode includes a number which changes from an original form to a modified form capable of being read by a human (see figs 7a and 7b) as in present claim 9, and it is inherent that the barcode forms a label for a container as in current claims 36 to 38. Therefore, claims 2 to 6, 9, 20 and 36 to 38 are not novel.

Claims 10, 19: Furthermore, citation (a) also discloses that the stimulus is a change in temperature or time (last line para [0025]) as defined in current claims 10 and 19. Hence, claims 10 and 19 are not novel.

Claims 15-17: In addition, citation (b) discloses that the stimulus is a change in chemical composition or exposure to gases or liquids (col 4 lines 1-2) as defined in present claims 15 to 17. Hence, claims 15 to 17 are not novel.

... continued in Supplemental Box

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of IV

The international application does not comply with the requirements of unity of invention because it does not relate to one invention or to a group of inventions so linked as to form a single general inventive concept. In coming to this conclusion the International Examining Authority has found that, a priori, there are two inventions:

1. Claims 1 to 31 and 34 to 38 are directed to an identifier comprising at least two machine readable components, wherein at least one component is capable of changing in response to a stimulus. It is considered that a change in a component in response to a stimulus comprises a first "special technical feature".
2. Claims 32 and 33 are directed to an identifier formed by applying a light coloured material over a dark coloured surface such that gaps in the light coloured material form a machine readable code. It is considered that the overlaying of the different coloured materials to form a code comprises a second "special technical feature".

Since the abovementioned groups of claims do not share any of the technical features identified, a "technical relationship" between the inventions, as defined in PCT rule 13.2 does not exist. Accordingly the international application does not relate to one invention or to a single inventive concept, a priori. As the search for the second invention required more than a little additional search effort over that for the first invention, an additional search fee is warranted.

Furthermore, the International Examining Authority has identified that there are several other inventions within the first main invention listed above. These inventions have been searched without extra charge. The different inventions are as follows:

- 1a. Claim 10 is directed to an identifier wherein the stimulus is a change in temperature.
- 1b. Claim 11 is directed to an identifier wherein the stimulus is a change in pressure.
- 1c. Claim 12 is directed to an identifier wherein the stimulus is a change in electric current.
- 1d. Claim 13 is directed to an identifier wherein the stimulus is a change in electromagnetic field.
- 1e. Claim 14 is directed to an identifier wherein the stimulus is a change in light.
- 1f. Claim 15 is directed to an identifier wherein the stimulus is a change in chemical composition.
- 1g. Claim 16 is directed to an identifier wherein the stimulus is exposure to certain gases or vapours.
- 1h. Claim 17 is directed to an identifier wherein the stimulus is exposure to certain liquids, emulsions or slurries.
- 1i. Claim 18 is directed to an identifier wherein the stimulus is exposure to certain solids.
- 1j. Claim 19 is directed to an identifier wherein the stimulus is a change in time or an indirect consequence of a change in time.

These groups are not so linked as to form a single general inventive concept, that is, they do not have any common inventive features, which define a contribution over the prior art. It is considered that identifiers responding to the different stimuli as listed above, all constitute different inventive concepts. The common concept linking together these groups of claims is an identifier as claimed in claim 1. However, this concept is not novel in the light of many patent documents (see for example any of the relevant documents cited in the International Search Report). Therefore these claims lack unity a posteriori.

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of V**Inventive Step (IS) Claims 1-25, 34-38**

Claims 1-6, 9, 10, 15-17, 19, 20, 34-38: as above.

Claims 7, 8, 21-25: These claims add features which are common general knowledge in the art and therefore a person skilled in the art would proceed to these results by routine non-inventive steps. For example, use of a check digit is well known in devices of this type (see current specification, pg 9 line 27 - pg 10 line 23). Hence, claims 7, 8 and 21 to 25 do not involve an inventive step.

Claims 10-19: Although some of these claims have been listed above as lacking novelty, each of these claims also represents no more than a mere choice of the stimulus by a person skilled in the art. Each of these is well known in the art and the relevant indicative material can be chosen so as to be stimulated by the chosen stimulus. Hence, none of the claims 10 to 19 involve an inventive step.

Novelty (N) and Inventive Step (IS) Claims 26-31

No single document or obvious combination of documents disclose an identifier including the features of independent claim 1 that further includes a power source and an electrical circuit. Therefore, it appears that claims 26 to 31 are novel and inventive.

Invention 2 (Claims 32, 33)**Novelty (N) Claim 32**

Claim 32: Citation (c) discloses all of the features of the invention defined in claim 32. The citation discloses a barcode for attachment on dark-coloured articles wherein the basic colour of the article forms the dark lines of the barcode when a white colour negative picture of the barcode is printed on the dark material (col 1 lines 30-45). Hence, claim 32 is not novel.

Inventive Step (IS) Claims 32-33

Claim 32: as above.

Claim 33: Furthermore, while citation (c) does not individually disclose all of the features of claim 33, when combined with either citation (a) or (b) or any one of the citations with the relevant indication on the International Search Report (ISR), as would be obvious to a person skilled in the art, it discloses all of the features of this claim. A person skilled in the art of identification labelling where the information can be updated, could reasonably be expected to have found, and to have understood, and regarded citations (a) and (b) (or any of the citations listed in the ISR) as being of obvious relevance to a solution involving stimulus responsive changing components. As has been discussed earlier, citations (a) and (b) (and in fact a large number of patent documents) disclose this sort of arrangement. Therefore, claim 33 lacks an inventive step in view of the obvious combination of citation (c) with citation (a) or (b) (or any citation from the ISR).

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